Agilent ChemStation

ECM Interface Guide

Agilent Technologies

Notices

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Product Name Variable software, where xx refers to minor revisions of the software that do not affect the technical accuracy of this guide.

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In This Guide...

This guide contains installation and reference information for the ECM Interface between the Agilent ChemStation and an Agilent Enterprise Content Manager (ECM) client/server system. It describes how to configure your the interface.

1 ECM Integration in ChemStation

This chapter gives an introduction to ECM, and describes how the interface is implemented.

2 Enabling ECM Functionality

In this chapter, the ECM product installation and the installation prerequisites to enable the ECM interface are described.

3 Getting started with ECM

This chapter describes how to log in to ECM in the ChemStation, and explains the ECM-related user interface items and toolbars, as well as the main preference settings.

4 Working with the ChemStation ECM Integration

This chapter describes the various workflows in the ECM integration, saving raw data automatically or manually and the reloading of items stored in ECM back to the ChemStation for reviewing and reprocessing.

5 Attribute Extraction Services for ChemStation Data

This chapter provides an overview of the available ECM Attribute Extraction Services (AES) for ChemStation data. The AES extract metadata information from the ChemStation data files. These metadata make the ChemStation data searchable. For detailed information, refer to the ECM documentation.

6 Using Print Services in the ChemStation

This chapter gives a brief overview of how to install and configure the ECM Print Services / CyberPrinter XP, which enables you to automatically upload ChemStation reports in a PDF format to ECM.

7 Troubleshooting

The chapter provides elementary troubleshooting hints.

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ECM Integration in ChemStation

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This chapter gives an introduction to ECM, and describes how the interface is implemented.

What is ECM?

The Agilent Enterprise Content Manager (ECM) is a web-based electronic library that allows you to safely archive and catalog any electronic file. ECM allows you to store and index analytical raw data, reports, and any other documents. The stored files are available to be shared with other users.

You can store any electronic file type, such as Microsoft Office documents, Adobe PDF documents, pictures, and molecular drawings, as well as raw data and reports generated by the ChemStation.

ECM allows you to easily collect, organize, search and review all of your data. It automatically extracts searchable metadata from files, and provides powerful search capabilities. In addition, ECM provides embedded viewers for many file types.

Add-On Solution for ChemStation: ECM Integration

Starting with revision B.02.01 SR1, the Agilent ChemStation provides an interface to Agilent´s Enterprise Content Manager (ECM), which enables you to store analytical data and reports in a secure location. From the ChemStation, you can log in to ECM and store methods, sequence templates, datafiles and reports in ECM. Data storage can be either automatic, at the end of a single run or sequence, or manual. ChemStation data stored in ECM can later be downloaded to the ChemStation for review or reprocessing at any time.

In addition to the ChemStation installation, the ChemStation integration with ECM requires the following:

- Installation of the G2189B ECM Integration product on the ChemStation client computer
- Installation of the ECM Desktop Client on the ChemStation client computer
- A connection between the ChemStation client computer and an ECM Server

The main workflows for the transfer of raw data are listed below. The workflows indicate the system activities in relation to the work processes (raw data acquisition/reprocess data), see Figure 1 on page 10.

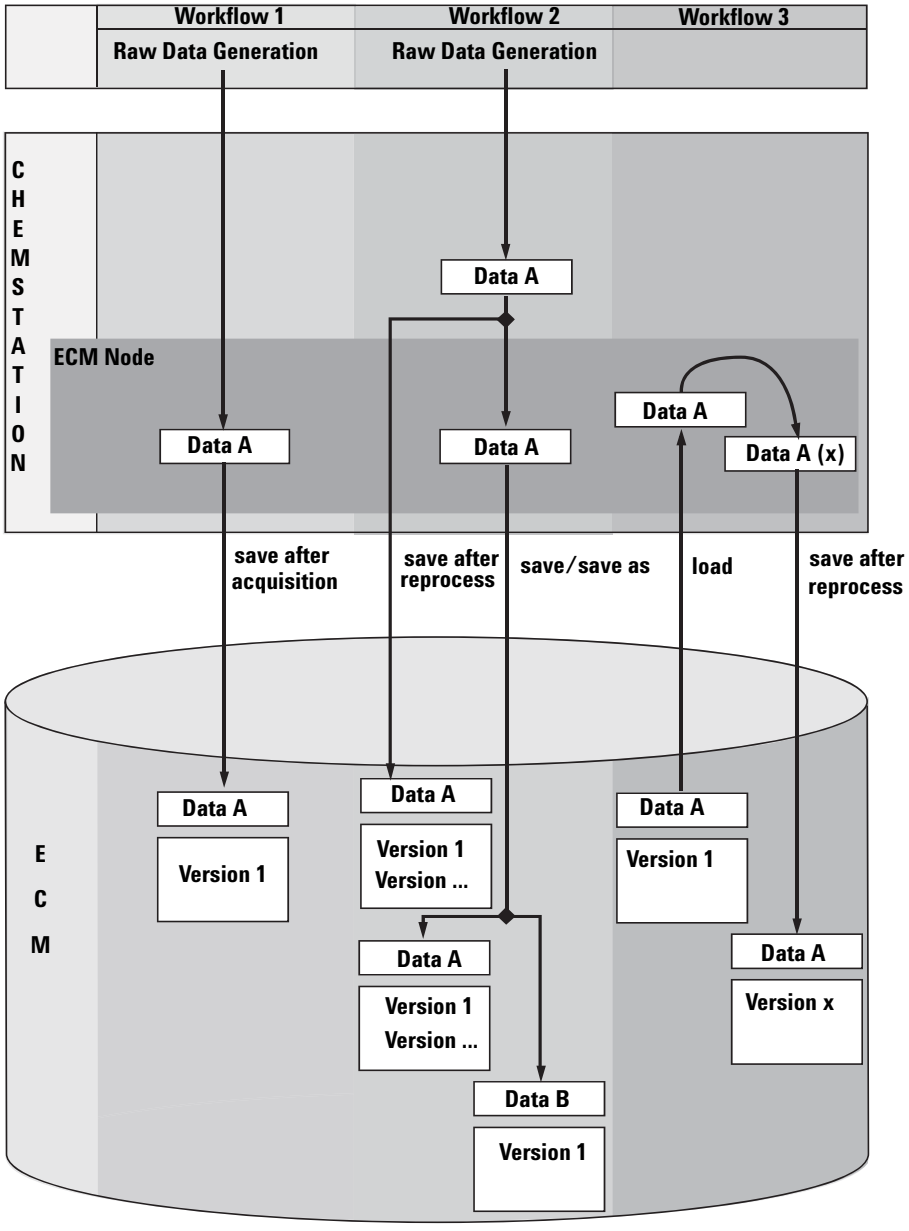

Figure 1 Main ChemStation -ECM workflows

Workflow 1: Raw Data Acquisition and Automatic Transfer to ECM

1 Analytical raw data are acquired using the ChemStation

2 The raw data are automatically uploaded to ECM using the configured path definitions immediately after the single run/sequence is finished.

3 A new ECM data set is created in the defined ECM location.

Workflow 2: Data Reprocess and Automatic Transfer to ECM

1 Data stored locally are reprocessed using the ChemStation

2 After reprocessing data are automatically uploaded to ECM using the configured path definitions.

3 A new ECM data set is created in the defined ECM location.

Workflow 3: Reprocessing ECM Data and Automatic Transfer back to ECM

1 ECM data are loaded into the ChemStation ECM node

2 ECM Data are reprocessed in the ChemStation

3 The data are uploaded manually or automatically back to ECM using the original path definitions of the ECM data

4 A new version of the original ECM data set is created in the defined ECM location.

Note that the workflows in this manual are simplified for the purposes of illustration, such that items stored in ECM with the same name have two entries in the illustrations, one for manual upload and one for automatic upload.

For more details, and for additional workflows, refer to Chapter 4, “Working with the ChemStation ECM Integration,” starting on page 37.

Data Storage in ECM

ECM provides a four-tier data storage model with a structure of Location, Cabinet, Drawer, Folder. The Location, Cabinet, Drawer and Folder names comprise the path name (called either LCDF Path or ECM Data Path) of the storage location. Data are stored at Folder level only.

The ECM program's content structure is similar to rooms filled with file cabinets. Each cabinet has multiple drawers, which then contain hanging folders. Finally, paper files are stored in the folders. The LCDF structure can be created using the ECM Web client. In addition, it is possible to create additional locations, cabinets, drawers and folders using the ChemStation ECM Data Path. In the ChemStation, it is also possible to set predefined tokens for the drawers and folders.

You can create a similar structure by first creating a location; in the ECM tree view, locations are denoted by a house icon. Inside each location, you create cabinets, denoted by the file cabinet icon. Inside each cabinet, you create drawers to organize folders, denoted by the drawer icon. Finally, inside each drawer, you create folders to store files that you upload. In the tree view, folders are denoted by the folder icon. As you build your content structure, it appears in the Content book, displaying the locations, cabinets, drawers and folders available therein, see figure Figure 2.

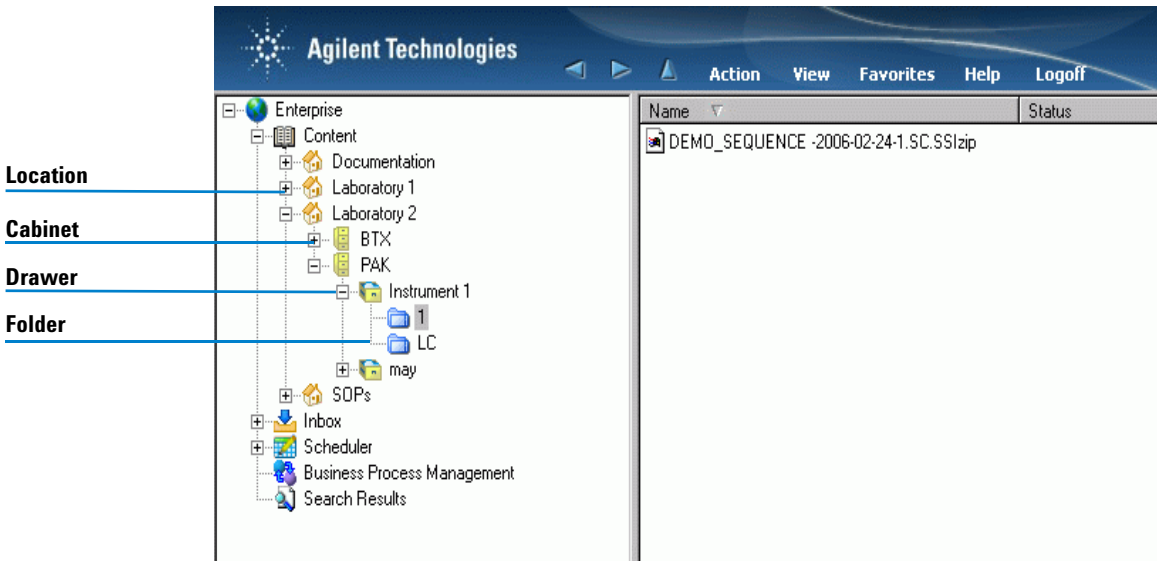

Figure 2 ECM Content Structure

Uploaded objects can be stored in the lowest (i.e. folder) level only. It is not possible to upload data to other levels of the hierarchy.

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Enabling ECM Functionality

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In this chapter, the ECM product installation and the installation prerequisites to enable the ECM interface are described.

Prerequisites

The following section describes the prerequisites necessary for successful installation and operation of the ECM Integration.

General Software Prerequisites

1. The ECM Server Software must be installed and configured as described in the Enterprise Content Manager Installation Guide. All server-related prerequisites, as well as the installation and configuration details are described in the guide.
   For the ECM version supported with the ChemStation, refer to the compatibility list available in the 'What´s new?' topic of the ChemStation online help.
2. Ensure that the minimum PC and operating requirements are met for the ChemStation B.03.01. Details can be found in the 'Installing your ChemStation' manual for your appropriate instrument.
3. The ChemStation B.03.01 needs either to be preinstalled, or ECM Integration needs to be installed during a new ChemStation B.03.01 installation. Microsoft.NET Framework Rev. 1.1 is installed automatically along with the ChemStation installation.
4. The ChemStation Client PC related prerequisites, as well as the installation and configuration details are described in the Enterprise Content Manager Installation Guide. Setting up the connection from the ChemStation to the ECM Server requires the address of the ECM Server.

   - Using ECM 3.2. the ECM Web Client and ECM Desktop Client Software must be installed on the ChemStation Client PC.
   - Using ECM 3.2.0.45, ECM 3.3.1 and higher only the ECM Web Client must be installed on the ChemStation Client PC.

     The ECM Desktop Client requires that Microsoft.NET Framework be present on the system. As mentioned in step 3, Microsoft.NET Framework is installed separately as part of ChemStation installation.

ECM Administrator Tasks

ECM User Roles

Users do not require any specific role in order to log in to ECM. However, in order for users to see a particular location, cabinet, drawer or folder in the user interface, they must have the role Reader as a minimum requirement. As a result, domain users with no global roles might not be able to view anything in the content unless they were granted the appropriate privileges.

The ECM administrator should grant the users of the ChemStation ECM Integration the 'Contributor' role. This can be done individually for each location, or at the global level for the entire ECM account. This allows the ChemStation ECM Integration user to view and add content to ECM. The Contributor role should be enhanced with the Add Folder privilege. This allows ChemStation ECM users to add folders to the LCDF hierachy.

CAUTION If the role does not include the Add Folder privilege, the user cannot add a new ECM Data Path (LCDF) in ECM.

It is possible to grant further privileges in ECM in addition to those provided by the Contributor role, by assigning additional roles such as Approver, Administrator, etc., either at the global level or at specific LCDF levels. For detailed information, refer to the Enterprise content Manager Administrator's Guide.

Installing the ECM Integration

The ChemStation ECM Integration is a separate installation package delivered on the ChemStation CD-ROM (CD1 - Installation). The ChemStation ECM Integration (G2189B) can be initially installed with the ChemStation software, or added afterwards to an existing ChemStation. After installation, the ChemStation ECM Integration is available for all installed instruments on the particular ChemStation Client PC.

Installation Procedure

Use the following procedure if you are using the CD-ROM (CD1 - Installation) to install or upgrade the Agilent ChemStation.

Before installing the software, verify that all prerequisites are met (see "Prerequisites" on page 16).

1. Insert the Agilent ChemStation CD-ROM (CD1 - Installation) into the CD-ROM drive.
2. From the Start menu in the Task Bar, select Start > Run.
3. At the command line, type *diskdrive*`:\Setup` (e.g., `D:\Setup`), then click on **OK**. The Installation Wizard will start immediately.

   If this is an installation on a new computer, proceed with step 8; if you would like to add the ChemStation ECM Integration on a system with the ChemStation preinstalled, proceed with step 4 and 5.

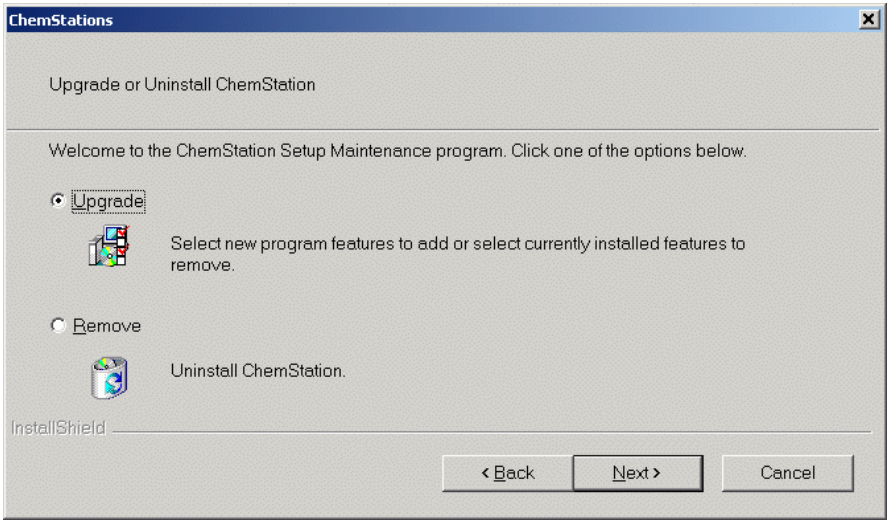
ChemStations
Upgrade or Uninstall ChemStation
Welcome to the ChemStation Setup Maintenance program. Click one of the options below.
Upgrade
Select new program features to add or select currently installed features to remove.
Remove
Uninstall ChemStation.
InstallShield
< Back
Next >
Cancel

Figure 3 Installation Wizard

NOTE You must upgrade to ChemStation Rev. B.03.01 BEFORE installing the ECM Integration, otherwise G2189BA ECM Integration is not available as a product for installation.

4 Select **Upgrade** to continue. In the next step, you choose between upgrading and installing additional software packages:

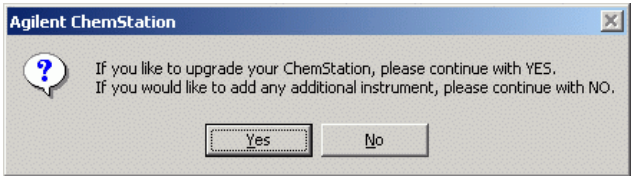
Agilent ChemStation
If you like to upgrade your ChemStation, please continue with YES.
If you would like to add any additional instrument, please continue with NO.
Yes
No

Figure 4 Upgrade selection

5 Choose **Yes** if you need first to upgrade to a supported ChemStation revision in order to run the ECM Integration. This enables the upgrade routine, and the Setup program updates *all existing Agilent ChemStation*

software on your PC. This guarantees that all Agilent ChemStation instrument modules have the same revision.

Choose **No** to add ECM Integration by using the initial installation screen on top of a supported ChemStation Revision.

After updating the existing Agilent ChemStation installation, select **Yes** to install the ECM Integration Software.

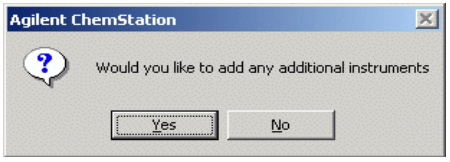

Figure 5 Upgrading

6 To install ECM Integration, select any Instrument, then select the additional software package 'G2189BA ECM Integration'. Note that the ECM Integration will be available for all instruments after installation.

For fresh installations, select the appropriate ChemStation product and install the required product. In addition, select G2189BA ECM Integration. Details regarding the instrument-specific ChemStation part are given in the '*Installing your ChemStation*' manual.

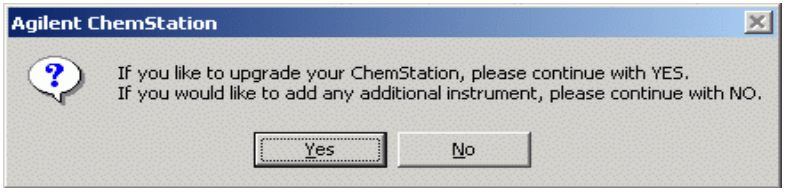
Agilent ChemStation
If you like to upgrade your ChemStation, please continue with YES.
If you would like to add any additional instrument, please continue with NO.
Yes
No

Figure 6 Instrument selection

Select an instrument number and click on **Add/Change**.

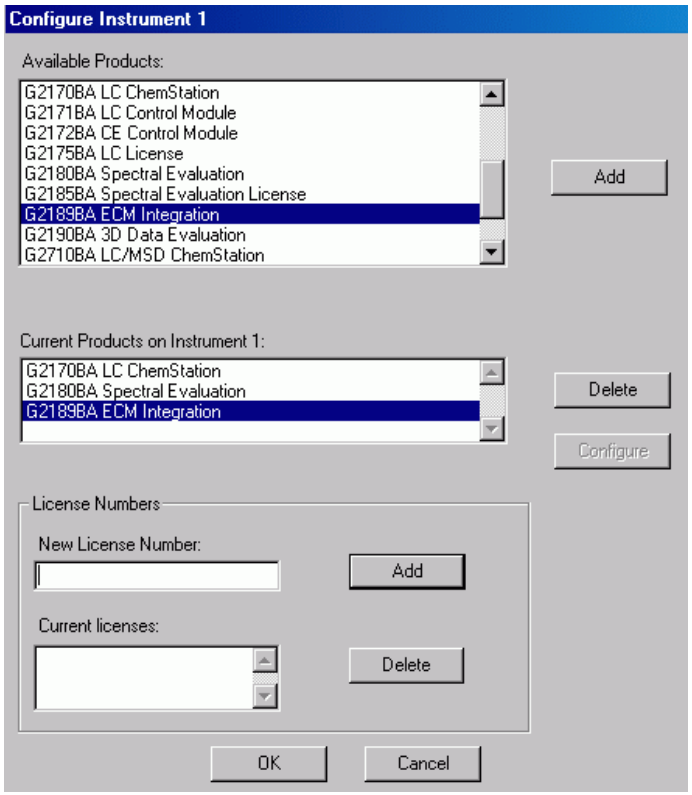

Figure 7 Configuration Window

7 Starting with ChemStation B.02.01 the Microsoft.NET Framework is used. If Microsoft.NET Framework is not already installed on your computer, the Agilent ChemStation installation forces the installation. The system needs to be rebooted after the Microsoft.NET Framework installation.
After the reboot of the system, the Agilent ChemStation installation continues.

8 Select the appropriate software module and/or G2189B ECM Integration from the list of available products in the Configure Instrument dialog box and click **Add** (see Figure 7 on page 21).

9 Enter the License Registration Number for the selected module in the New License Number field and click **Add**. The applicable product and license numbers are printed on your Software Certificate and Registration Packet.

No additional License Registration Number is needed for the G2189B ECM Integration.

10 The Setup program prompts you to configure additional new instruments you installed; for a fresh installation, the configuration editor appears directly on screen. Skip this option and configure the instruments later as documented in the 'Installing your ChemStation' manual for the appropriate instrument.

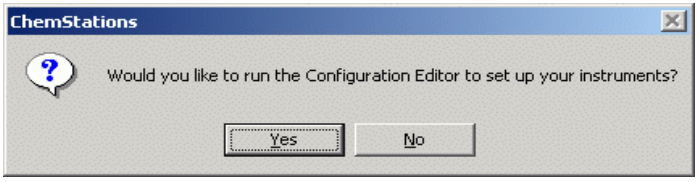

Figure 8

11 Click on **No** to exit the Setup program and return to Windows.

Your software installation is now complete. The Setup program made changes to your CHEMSTATION.INI file.

After you have installed and configured the Agilent ChemStation software, be sure to exit Windows and reboot your system before starting the Agilent ChemStation.

Compatibility of ECM Integration with other Solutions

ECM is not supported in combination with the following ChemStation Add-Ons and features:

- ChemStore
- Purify
- Easy Access
- Priority Samples
- ChemStation “Unique Folder Creation OFF” (item is not accessible)

Uninstalling ECM Integration

ECM Integration is a ChemStation component integrated for each available instrument after installation.

ECM integration is uninstalled along with the ChemStation uninstallation routine using the Windows uninstall procedure (Control Panel > Add/Remove Programs). For uninstallation details please refer to the ‘Installing your ChemStation’ manual for the appropriate instrument.

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This chapter describes how to log in to ECM in the ChemStation, and explains the ECM-related user interface items and toolbars, as well as the main preference settings.

Overview of the ChemStation ECM Integration

Log In /Log Out

You can log in to ECM during the ChemStation startup; if you reject the ECM login during the startup, you can log in to ECM later. If you are not connected to ECM, all the ECM functionality is grayed out.

To prevent unauthorized access to ECM, or unauthorized use of the ECM Integration, ECM requires authentication with a user name and password. In addition, the ECM administrator needs to assign user privileges to each user, defining which content users can access.This user administration needs to be set up and managed on the ECM server. For details related to user setup, refer to the Enterprise Content Manager Administrator's Guide.

You can log in to ECM from the following ChemStation views:

- Method and Run Control
- Data Analysis
- Report Layout

The LogIn dialog box requires you to enter a set of valid authorization details in order to log in to ECM. You need to enter the following login details; the login information is ECM server-specific and will be provided by the ECM administrator.

- Server URL: the URL of the ECM Server
- Username: the user name defined in the ECM account, or your NT Domain User name
- Password: the password provided by your administrator, which can be changed on request (for ECM 'built-in' users), or the password of your NT Domain account, if you are logging in using your NT Domain user name.
- Account: you can store content to the locations assigned in the specific account; one ECM server may have several accounts.
- Domain: the server administrating the ECM users

Once you have logged in to ECM, it is possible to upload data to ECM, and work in parallel on the local ChemStation file system.

The login is dependent on the instrument session; only one user can be logged in to the ChemStation ECM Integration at any one time. In order to change the user, the current user must first log out.

For more details about LogIn refer to the ECM User/Administrator's Guide

ChemStation Operator and ECM User

It is possible to log in to ECM either during the start up of the ChemStation or at any later point in time, independently of the instrument session. If you log in to ECM using the ECM username and account, as soon as you are authorized by the ECM system, the ChemStation operator name in the sample info (when running single samples) or the sequence parameters (when running a sequence) is overwritten by your ECM user name. As long a user is logged on to ECM, the operator name is given by the ECM logon and cannot be overwritten. As soon as you log out from ECM, the ChemStation operator name defined by the ECM is removed, and is again accessible in the sample info and sequence parameters.

While acquiring data to ECM, it is not possible either to log in or to log out of ECM. This prevents the operator name being changed during data acquisition.

ECM Integration User Interface in the ChemStation

With the installation of the ECM Integration, a new menu 'ECM' is available in the following ChemStation views:

Table 1 ChemStation and ECM Integration Toolbars

ChemStation View	ECM Functionality
Method and Run Control	LogIn/LogOut Preferences Load, Save, Save As Method Load, Save, Save As Sequence
Data Analysis	LogIn/LogOut Preferences Load, Save, Save As Method Load, Save, Save As Data
Report Layout	LogIn/LogOut Preferences Load, Save, Save As Method

Note that there is no ECM menu in either OQ/PV view or Diagnosis view.

In addition, the Navigation Pane contains an additional nodes ECM, in the ChemStation Explorer, see figure Figure 9. If any data, method or sequence is loaded back from ECM to the ChemStation, the files are displayed in the ECM node. The ECM node is a temporary, secured ChemStation location, always holding the latest loaded item (data/method/sequence). As soon as a new item is downloaded, the new item replaces the existing item in the node.

Using the offline ChemStation in the Data Analysis view, an second ECM node ECM online is available within the Data Tab of the ChemStation Explorer, see figure Figure 9. If data are acquired in online, users can access and review this data already from within the offline ChemStation.

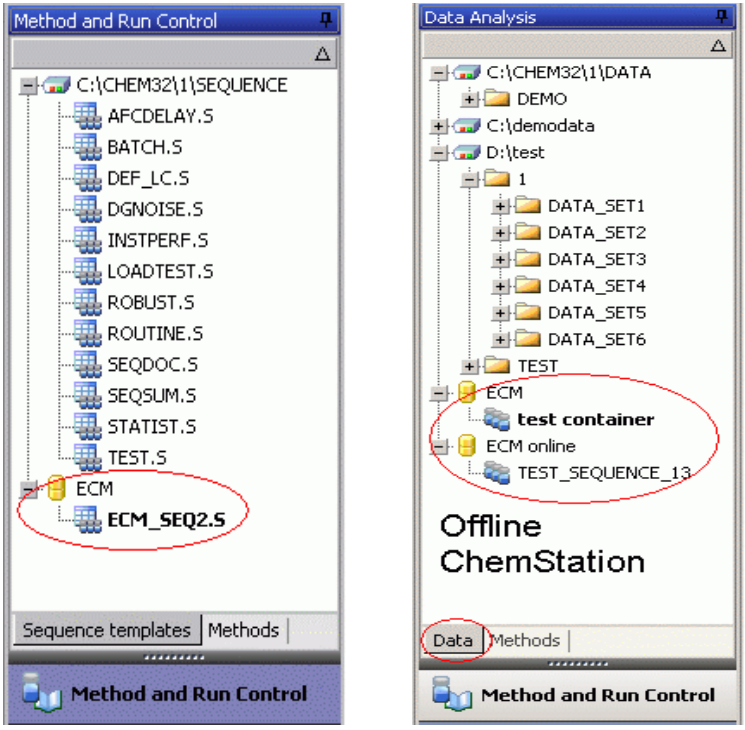

Figure 9 ECM Nodes in ChemStation Online/Offline

If a method and/or sequence is loaded to the ECM node in the ChemStation, it is possible to load the item into the ChemStation using the right mouse click function or by double-clicking the name. The status windows for the method and sequence indicate that the method and/or sequence have been loaded from ECM, see Figure 10.

Figure 10 ECM Method and Sequence in the ChemStation

ECM Preferences

In order to automatically store ChemStation data to ECM, two preferences need to be specified:

- ECM Data Path
- Transfer settings

Both items are session-independent and can be specified independently for online and offline systems. For information about data storage in ECM, see"Data Storage in ECM" on page 12.

ECM Data Path

In the ChemStation ECM Integration, the ECM path needs to be specified in order to save the data to the correct location. In the Preferences dialog box, the 'ECM' tab allows you to define the ECM Data Path. The ECM Data Path reflects the LCDF structure in ECM.

The ECM Data Path is instrument- and session-independent. A path needs to be selected for each instrument, as well as for each online and offline session.

To specify the ECM Data Path, you need to select a Location and Cabinet available in the ECM Browser. For the Drawer and Folder, you can either select an existing 'Drawer' and 'Folder' in ECM, or you can select predefined tokens for the automatic creation of the path. When you use the predefined tokens in the ECM Data Path, the system automatically creates the items if they do not already exist in ECM.

Uploaded objects can be stored only at the folder level.

Table 2 ECM Data Path Items

ECM Data Path Item	Convention
Location	Fixed location to be selected in ECM
Cabinet	Fixed cabinet to be selected in ECM
Drawer	Drawer available in ECM Tokens: Instrument Name, Instrument Number, Operator
Folder	Folder available in ECM Tokens: Instrument Name, Instrument Number, Operator

Transfer Settings

In the **ECM** tab of the **Preferences** dialog box (**View** > **Preferences**), you can specify the automatic settings for the transfer of raw data. The transfer settings are instrument- and session-independent. For each instrument, the transfer settings need to be chosen individually, as well as for each online and offline session.

The transfer settings, as well as the ECM Data Path, are used to store data automatically to ECM. The following transfer settings are available for raw data transfer only:

- Save data automatically after completion of single run/sequence
- Save data automatically after reprocessing

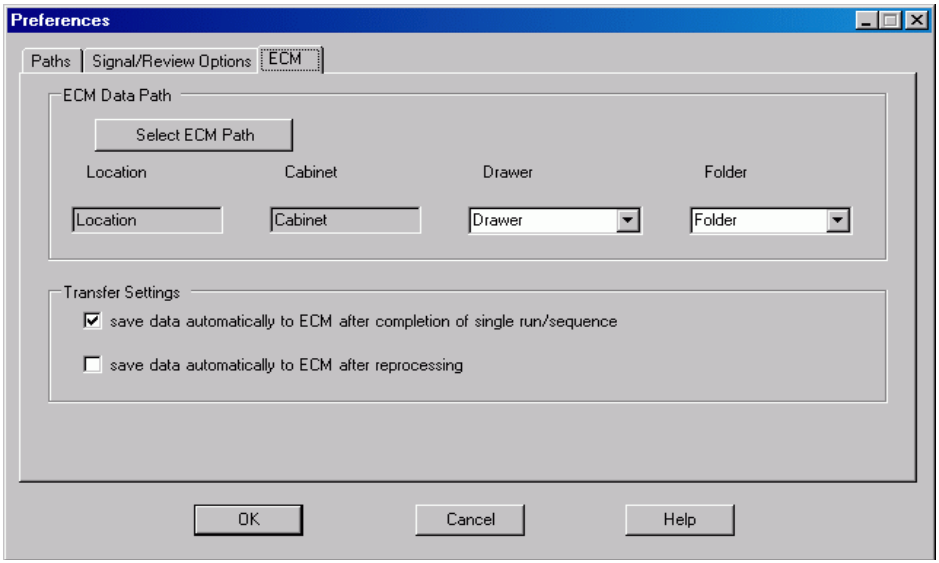

Figure 11 ChemStation ECM Preferences

NOTE If you are performing data acquisition from the Diagnosis view or OQ/PV view of the ChemStation, the transfer settings are ignored. The analytical raw data are written to the ChemStation data file system as predefined in the diagnosis or verification methods.

Save Data automatically after completion of Single Run/Sequence

If **Save data automatically to ECM after completion of single run/sequence** is selected, raw data is acquired and directly uploaded into ECM after the single run is finished, or the sequence is completed. In this case, the analytical raw data is written directly to ECM, and the data files/sequence containers are not written to the local ChemStation file system.

For the automatic data upload to ECM, the system uses the specified ECM Data Path, hence the data path for single runs and sequences is grayed out and not accessible.

For more information, please refer to Chapter 4, “General Workflow Concept of ECM Integration,” starting on page 38.

Save Data automatically after Reprocessing

If **Save data automatically to ECM after reprocessing** is selected, the sequence data container is automatically uploaded to ECM after reprocessing the sequence. Depending on the kind of the reprocessed data, you can choose between the following two workflows:

1. reprocess data stored locally (in the ChemStation file system)
   Use this option to reprocess data stored locally in the ChemStation file system. The user needs to specify the ECM Data Path prior the upload to ECM. The local data are reprocessed and the analytical raw data are uploaded using the specified ECM path. The local data will remain on the ChemStation file system.
2. reprocess downloaded ECM data (available in the ECM node)
   Use this option to reprocess data downloaded from ECM (the data are available in the ECM node), the ECM Data Path is set to the ECM Data Path currently used in ECM for this data automatically. It is possible to change this path. The data downloaded from the ECM system are present in the ECM node only, and not in the ChemStation file system.

When downloading data from ECM to the ChemStation, you can also select to check out the data. This option locks the data files, and prevents other users making changes on the data at the same time. For more details, refer to Chapter 4, “General Workflow Concept of ECM Integration,” starting on page 38.

Compressed ChemStation File Formats

When Chemstation data are uploaded to ECM, the data are packaged into an SSI.ZIP file. Using the ChemStation, it is possible to upload the following SSI.ZIPs to the specified ECM location or to download them from ECM:

Table 3 ChemStation and ECM Data Format

ChemStation Data since A.10.02	Packaging Format
ChemStation Data (single/sequence runs) (*.d file) acquired with ChemStations since A.10.02 using the XML export routine	*.D.ChemStation.SSIzip

ChemStation Data B.02.01 SR1	Packaging Format
Single Runs (*.d file, ACQ.m and DA.M)	*.D.SSIzip
Sequence Data Container The sequence container contains recursively the whole sequence data stored in the sequence subdirectory: - all *.d files along with ACQ.m and DA.M - all methods *.m used during acquisition - batch file *.b - sequence logbook file *.log	*.SC.SSIzip
Methods	*.M.SSIzip
Sequences	*.S.SSIzip

The packaging of ChemStation items is part of the Chemstation ECM Integration and cannot be manually changed.

The packaging is carried out automatically when the data are uploaded to ECM. When the SSI.zip files are downloaded from ECM to the ChemStation, they are unpacked into the ECM node in the ChemStation Explorer.

4
Working with the ChemStation ECM Integration

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This chapter describes the various workflows in the ECM integration, saving raw data automatically or manually and the reloading of items stored in ECM back to the ChemStation for reviewing and reprocessing.

General Workflow Concept of ECM Integration

The Chemstation ECM Integration provides the ability to open and save different Chemstation items (see below) into their Chemstation contexts.

Therefore, the ECM node in the ChemStation is a reserved data space where ECM data that is currently in use can be stored. This data space is a local cache, called the ECM node, and is only available in the ChemStation Explorer. In order to copy, save, load, etc. items from the ECM node, you have to use the tools provided in the ChemStation.

The following ChemStation objects can be stored in ECM:

- Methods
- Sequence Templates
- Single Run Data and Sequence Data

If an item is loaded from ECM back into the ChemStation, it is first loaded into the ECM node and than automatically loaded into the ChemStation context, for example, a datafile from ECM is loaded into Data Analysis.

Depending on the item different workflows are available. The automatic workflows are only present for raw data upload to ECM. Loading back stored Data from ECM to the ChemStation a manual upload is required. Methods and Sequence Templates require always a manual load into the ChemStation as well as a manual upload to ECM.

The following workflows are available using the ChemStation ECM integration:

Table 4 Available workflows

Items generated/stored/loaded in ChemStation - ECM	Workflow
Analytic raw data (directly acquired to ECM)	automatic workflow - 'save data automatically to ECM after completion of single run/sequence'
Analytic raw data (acquired first to the local ChemStation file system)	automatic workflow - 'save data automatically to ECM after reprocessing' manual workflow - 'save as' to ECM
ECM: Data (Data stored in ECM)	manual workflow - 'load' from ECM manual workflow - 'save as' to ECM automatic workflow - 'save data automatically to ECM after reprocessing'
Method/Sequence Template -locally stored	manual workflow - 'save as' to ECM
Method/Sequence Template - stored in ECM	manual workflow - 'load' from ECM manual workflow - 'save as' to ECM

Data-related Workflows - Data Acquisition

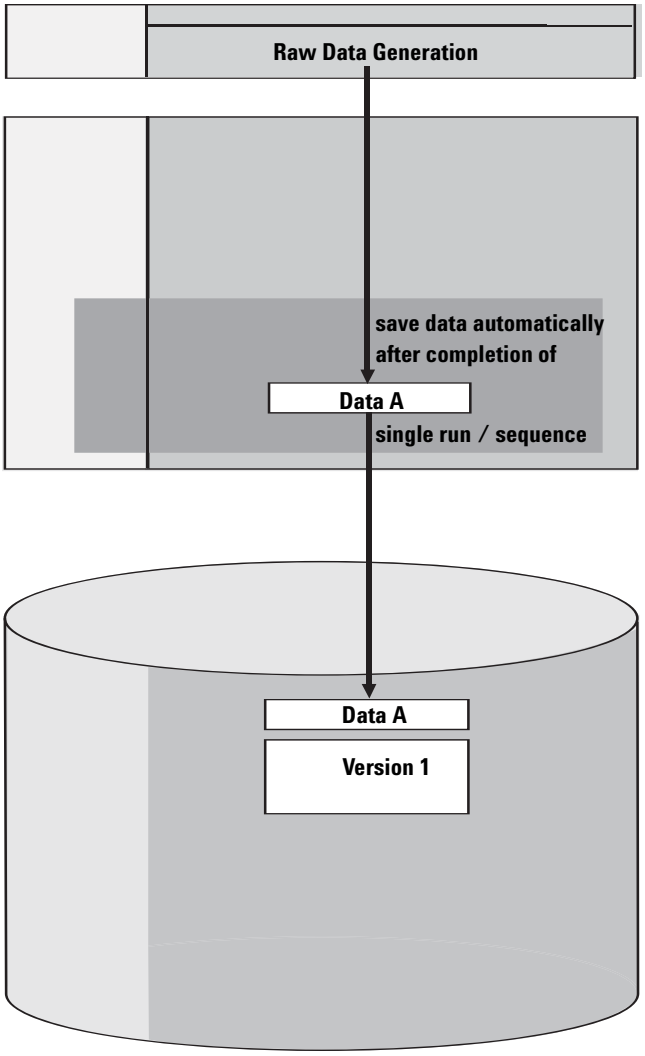

Figure 12 Data related workflow: Data Acquisition

Save Data automatically after Completion of Single Run/Sequence

The workflow 'Data Acquisition', see Figure 12 on page 40 illustrates how raw data are uploaded to ECM directly after data acquisition. In this workflow, the raw data are not stored locally on the ChemStation file system; they are directly uploaded to ECM. In the ChemStation user interface, they are present in the ECM node only.

To save data to ECM automatically after completion of a single run or sequence

1 Log in to ECM in an online ChemStation.

2 In the ECM tab of the Preferences dialog box (View > Preferences), select **ECM Data Path** to specify the location to be used for the next single run/sequence data upload.

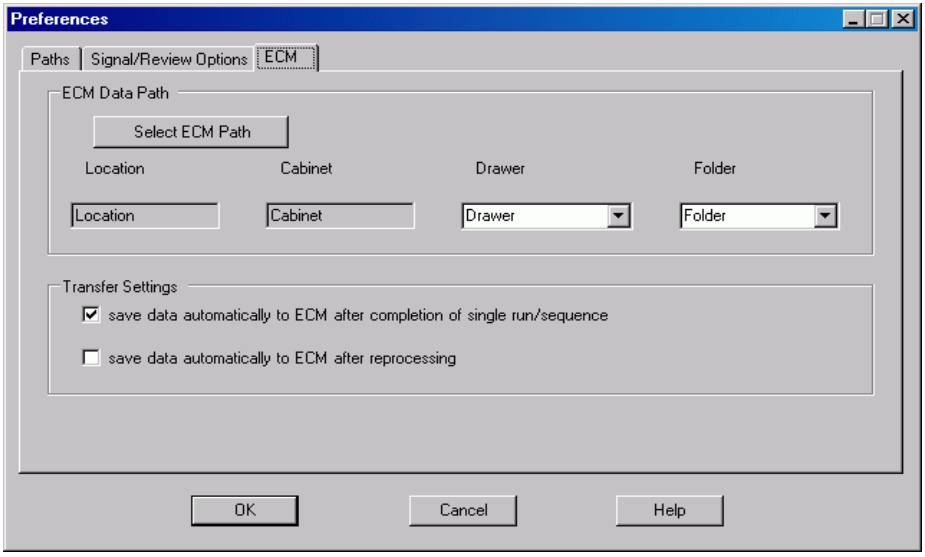

Figure 13 ChemStation ECM Preferences

3 In the Transfer Settings group of the ECM tab of the Preferences dialog box, select **Save data automatically to ECM after completion of single run/sequence**.

4 Create your sample info for single runs, or complete the sequence template along with the sequence parameters for the next acquisition.
Note that

- the operator name is automatically updated to the currently logged in ECM user
- the data path is not accessible; the raw data is stored directly to ECM using the specified ECM Data Path

5 Start the acquisition of the single run or sequence.

As soon as the single run is finished, or the sequence is completed, a message box informs you about the data upload to ECM. Click **OK** to close the message box.

The newly acquired data are the first version of this particular data set. They are now present in

- the ECM node (the Secure Area of the ChemStation)
- the ECM folder (as specified in the ECM Data Path) as <data filename> version 1
  If data with the same name are uploaded to the same folder, ECM automatically creates a new version of the data set.

Data-related Workflows - Locally stored Data

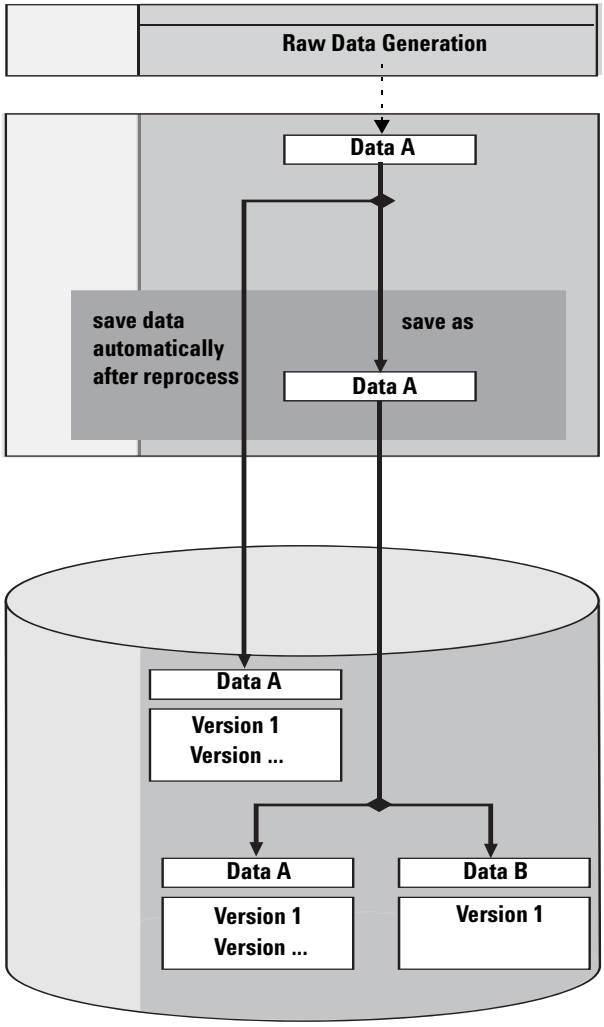

Figure 14 Data related workflow: Data Stored Locally - Reprocess/Save As

Save Data automatically after reprocessing - Locally stored Data

The workflow 'Locally stored Data: Reprocess', see Figure 14 on page 43 illustrates how locally stored raw data on your ChemStation PC are automatically uploaded to ECM directly after reprocessing a sequence in ChemStation Data Analysis. This workflow can be used only for sequences acquired with ChemStation Rev. B.02.01 SR1 and later.

1. Log in to ECM from the ChemStation.
2. In the ECM tab of the Preferences dialog box (View > Preferences), select **ECM Data Path** to specify the ECM location be used for the sequence data upload.
3. In the Transfer Settings of the ECM tab of the Preferences dialog box, select **Save data automatically to ECM after reprocessing**, see Figure 13 on page 41.
4. In the Data Analysis View, select your sequence data to be reprocessed. If necessary, modify the sequence table.
5. Reprocess the sequence.

   As soon as the sequence reprocess is completed, a message box informs you about the data upload to ECM.

   The newly uploaded data are the first version of this particular data set. They are now present in:

   - the ECM folder (as specified in the ECM Data Path) as <data filename> version 1
     If data with the same name are uploaded to the same folder, ECM automatically creates a new version of the data set.
   - The original folder in the ChemStation
     The reprocessed sequence data set also remains on the local ChemStation file system.
     Note that the reprocessed data are not visible in the ECM node in the ChemStation.

Save as - Locally stored Data

The workflow 'Locally stored Data: Save as', see Figure 14 on page 43 illustrates how locally stored raw data on your ChemStation PC can manually be uploaded to ECM. The data can be saved to ECM with a different name.

1 Log in to ECM from the ChemStation.

2 In the ChemStation, load the single run/sequence data (for example, using the ChemStation Explorer).

3 In the ChemStation ECM Menu, select **Save Data As**
The ECM Save dialog box opens.

4 If necessary, navigate to the ECM data path of your choice to upload the single run/sequence data. Note that a folder needs to be selected.

5 If necessary, save the item using a different name. By default the original name is used, but can be modified.

6 Click **Save** to leave the ECM Save dialog box.

7 When the Add File dialog box appears, enter a reason for the upload and click **OK** to proceed with the upload. The reason appears in the audit trail from ECM.

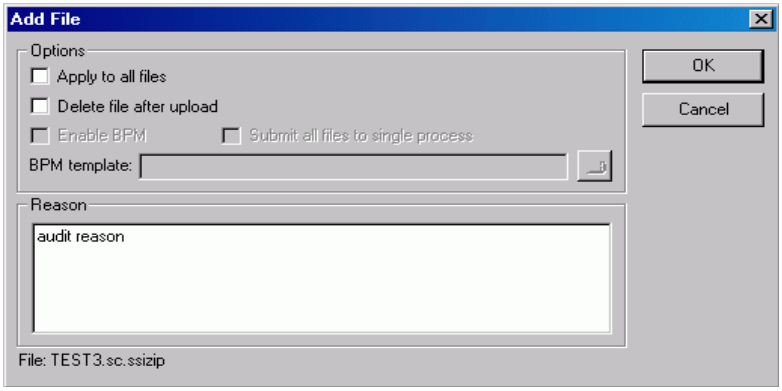

Figure 15 The Add File dialog box for data

NOTE The option **Delete file after upload** in the Add File dialog box has no impact on ChemStation data files uploaded using the ChemStation ECM Integration. The original files remains on the local ChemStation file system.

The progress of the upload is displayed in a window until the upload to ECM has been completed. Note that

- single run data are automatically packaged into *.d.ssizip files
- sequence data are automatically packaged into *.sc.ssizip files

The newly uploaded single run/sequence data are now present in the following locations:

- the ECM folder (as specified in the ECM Data Path) as single run/sequence <data filename> version 1 up to version x
  ECM automatically tracks the versions of a data set when new versions are uploaded to the same folder.
- the ECM node (secure ChemStation area)
- The original folder in the ChemStation
  The single run/sequence data set also remain on the local ChemStation file system.

Data-related Workflows for ECM Data

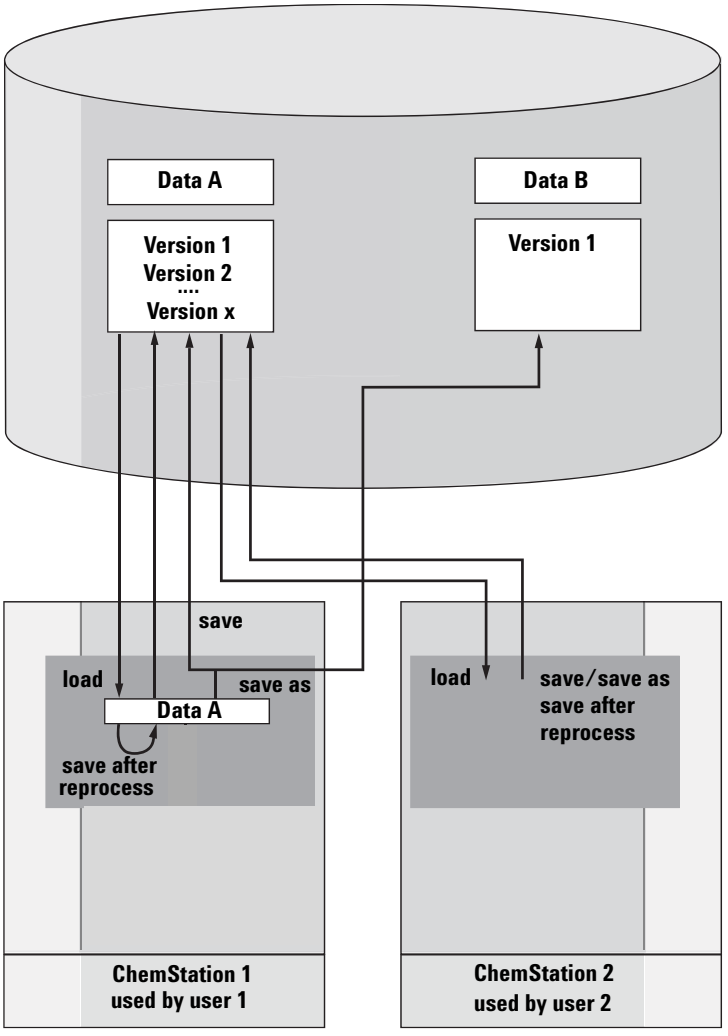

Figure 16 ECM Data related workflow: Load/Reprocess/Save/Save As

Load - ECM Data

The workflow ‘Data related workflow: ECM Data - Load’, see Figure 16 on page 47 illustrates how data that are stored in ECM can be loaded back into the Chemstation for reviewing and reprocessing.

1 Log In to ECM from the ChemStation

2 From the ChemStation ECM Menu select **Load Data**.

3 The ECM Open dialog box opens. Navigate to the ECM folder to load the data of your choice and select one of the following packaged files

- single run data: *.d.ssizip files
- sequence data: *.sc.ssizip files

In order to see more details regarding the available items, it is possible to use the details view using the details icon selection in the ECM Open dialog box, see Figure 28 on page 60, marker 1.

When the **Show Revisions** check box is enabled, it is possible to see all available versions of a data set when opening the data, see Figure 17 on page 48, marker 2. By default the last version is opened.

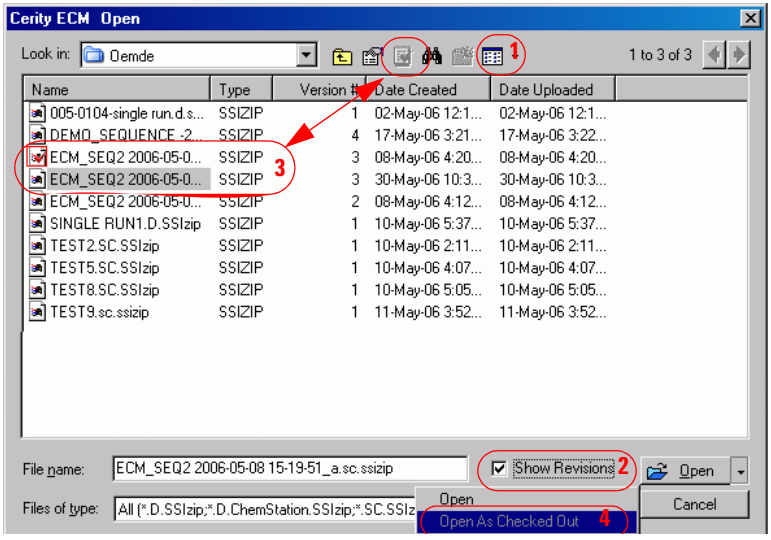

Figure 17 ECM Open dialog

4 If the item is checked out and used by the current user/another user, the item is marked as 'checked out', see Figure 17 on page 48, marker 3:

- : (blue icon) the item has been checked out by you (current user)
- : (red icon) the item has been checked out by another ECM user

  It is possible to load the checked out item, but it is not possible to save it back to ECM unless it is checked in again by the user that checked the item out.

5 Select **Open** to download the item to the ChemStation. By default, the item is not checked out of ECM when it is loaded into the ECM node of the ChemStation. In order to prevent other users from modifying the item while you are working on it, you can select the **Open as Checked Out** option to mark the item as checked out from ECM, see Figure 17 on page 48, marker 4.

NOTE By default, any item loaded from ECM into the ChemStation is not checked out from ECM and is still accessible by other ECM users. In order to prevent other users working on the same item, be sure to check out the item that you want to modify.

6 If the **Show Revisions** check box is selected, and multiple versions of the item are available, you have the choice to the select a specific version. Otherwise, the latest version is loaded. The progress of the loading is displayed in a window until the item is opened in the ChemStation.

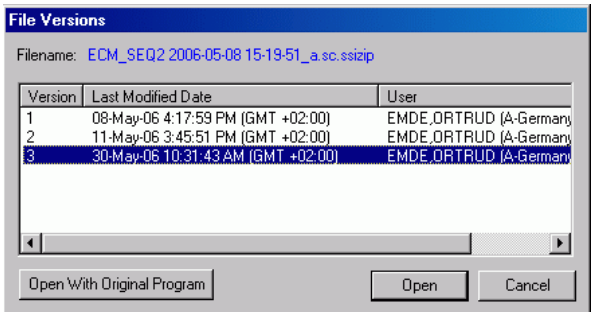

Figure 18 ECM File Version

The opened ECM data are immediately loaded in the corresponding ChemStation view, and the files are present in the following location:

- ECM node (secure ChemStation area)

Within the ChemStation Explorer, tooltips are available and provide more information about the ECM storage location of the currently loaded file and its checkout status, see Figure 19.

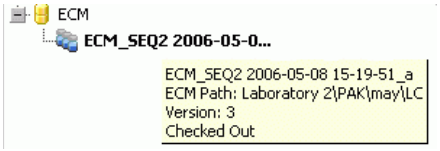

Figure 19 ECM Data in the ChemStation

In addition it is possible to review the acquisition parameters for the selected data files by using the View ACQ method item in the navigation table. The acquisition method (ACQ.M), stored along with the data file, can be reviewed, by using the left-mouse click action in the navigation table, see Figure 20.

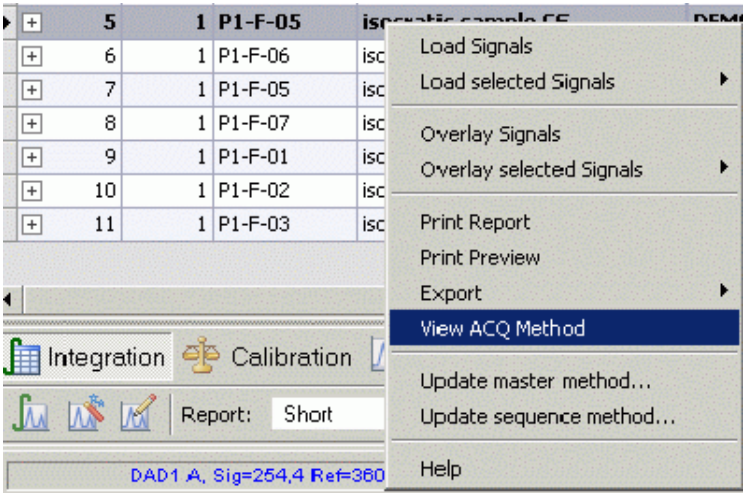

Figure 20 View ACQ Method of Data File

Save Data automatically after reprocessing - ECM Data

The workflow 'Reprocess - ECM Data', Figure 16 on page 47, requires that an ECM sequence data package is available in the ECM Integration in the ChemStation. The sequence data are displayed in the ECM node of the ChemStation and need to be loaded in ChemStation Data Analysis. Ensure that you are logged in to ECM.

1 If necessary, modify the ECM Data Path in the ECM tab of the Preferences dialog box (View > Preferences) for the sequence data upload to ECM.

2 In the Transfer Settings of the ECM tab of the Preferences dialog box, select **Save data automatically to ECM after reprocessing.**

3 In the Data Analysis View, select your sequence data to be reprocessed. If necessary, modify the sequence table.

4 Reprocess the sequence.

Depending on the checkout status of the data, one of the following three scenarios can be expected:

a If you have checked out the data already during the load process from ECM to the ChemStation, it is possible to save the data directly back to ECM and automatically release the checkout.

b If you have not checked out the data during the load process from ECM to the ChemStation, the system gives you the possibility to check out the data prior to saving them back to ECM. Select **Yes** to save the data to ECM and continue with the next step.

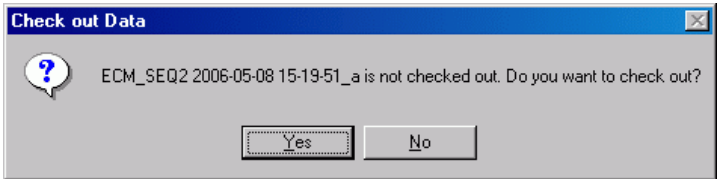

Figure 21 Check Out Data

c If you have not checked out the item during the load process from ECM to the ChemStation and another ECM user has checked out the data in the meantime, you cannot proceed with the upload back to ECM. A warning is displayed, see Figure 24 on page 54, and it is not possible to

save the data back to ECM, until the other user has released the checked out data.

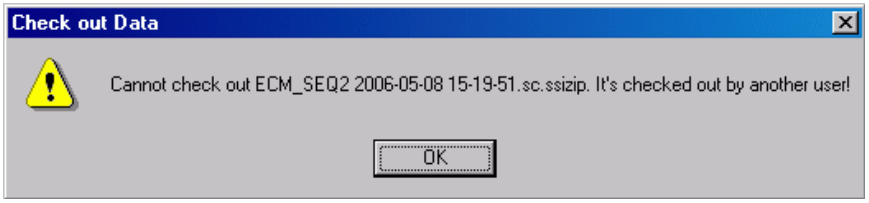

Figure 22 Check Out by other user

NOTE In order to modify items in the ChemStation, the item should be checked out from ECM. Otherwise there is no guarantee that you are working on the latest version.

As soon as the sequence reprocess is completed, a message box informs you about the data upload to ECM.

The uploaded data are a new version of this particular data set. They data are now present in:

- ECM Folder (as specified in the ECM Data Path) as <sequence datafile name> version x, where ECM automatically updates the version information.
- ECM node (secure ChemStation area)

Save - ECM Data

The workflow 'Save -ECM Data', see Figure 16 on page 47, requires that ECM data are available in the ECM Integration in the ChemStation. The data are displayed in the ECM node of the ChemStation. In order to save them back to the ECM data path, ensure that the ECM data are loaded in Data Analysis and that you are logged in to ECM.

1 In the ChemStation ECM Menu select **Save Data**.

Depending on the checkout status of the data, one of the following three scenarios can be expected:

a If you have checked out the data already during the load process from ECM to the ChemStation, it is possible to save the data directly back to ECM and automatically release the checkout.

b If you have not checked out the data during the load process from ECM to the ChemStation, the system gives you the possibility to check out the data prior to saving them back to ECM. Select **Yes** to save the data to ECM and continue with the next step.

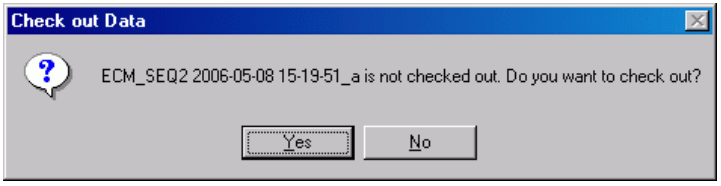

Figure 23 Check Out Data

c If you have not checked out the item during the load process from ECM to the ChemStation and another ECM user has checked out the data in the meantime, you cannot proceed with the upload back to ECM. A warning is displayed, see Figure 24 on page 54, and it is not possible to save the data back to ECM, until the other user has released the checked out data.

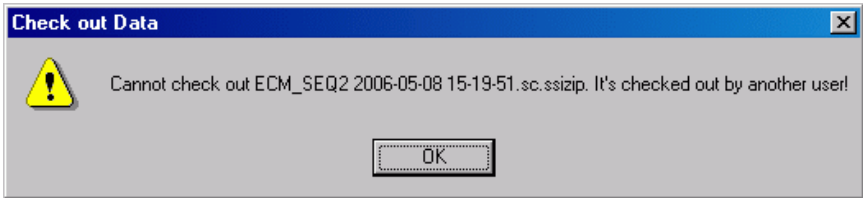

Figure 24 Check Out by other user

NOTE In order to modify items in the ChemStation, the item should be checked out from ECM. Otherwise, there is no guarantee that you are working on the latest version.

2 When the Add File dialog box appears (see Figure 15 on page 45), enter a reason for the upload and click **OK** to proceed with the upload. The reason appears in the audit trail from ECM.

NOTE The option **Delete file after upload** in the Add File dialog box has no impact on ChemStation data files uploaded using the ChemStation ECM integration.

3 The progress of the upload is displayed in a window until the upload to ECM has been completed.

4 The newly uploaded data are now present in the following locations:

- ECM Folder (as specified in the ECM Data Path) as <datafile name> version x, where ECM automatically updates the version information.
- ECM node (secure ChemStation area)

Save as - ECM Data

The workflow ‘Save as - ECM Data’, see Figure 16 on page 47, requires that ECM data are available in the ECM Integration in the ChemStation. The data are displayed in the ECM node of the ChemStation. In order to save them back to the ECM data path, ensure that the ECM data are loaded in Data Analysis and that you are logged in to ECM.

1 In the ChemStation ECM Menu select **Save Data As**. The ECM Save dialog box opens.

2 If necessary, navigate to the ECM data path of your choice to save the ECM data back to ECM. Note that a folder needs to be selected.

The option ‘save as’ means in general that you are saving the item using a new, unique name. In this respect, the current checkout status of the original item in ECM does not need to be taken into account. A new item, version 1, is created in ECM.

NOTE Be aware that when you use the ‘save as’ option for checked out data to the ChemStation ECM Integration, the item is **not** automatically released by saving the item back to ECM using a new name. The original item remains checked out.

3 When the Add File dialog box appears (see Figure 15 on page 45), enter a reason for the upload and click **OK** to proceed with the upload. The reason appears in the audit trail from ECM.

NOTE The option **Delete file after upload** in the Add File dialog box has no impact on the upload of the ChemStation items.

4 The progress of the upload is displayed in a window until the data is saved back to ECM.

5 The newly saved ECM data are now present in the following locations:

- ECM folder (as specified in the ECM Data Path) as <datafile name> version 1, where ECM automatically updates the version information.
- ECM node (secure ChemStation area)

Workflows for Method and Sequence Templates

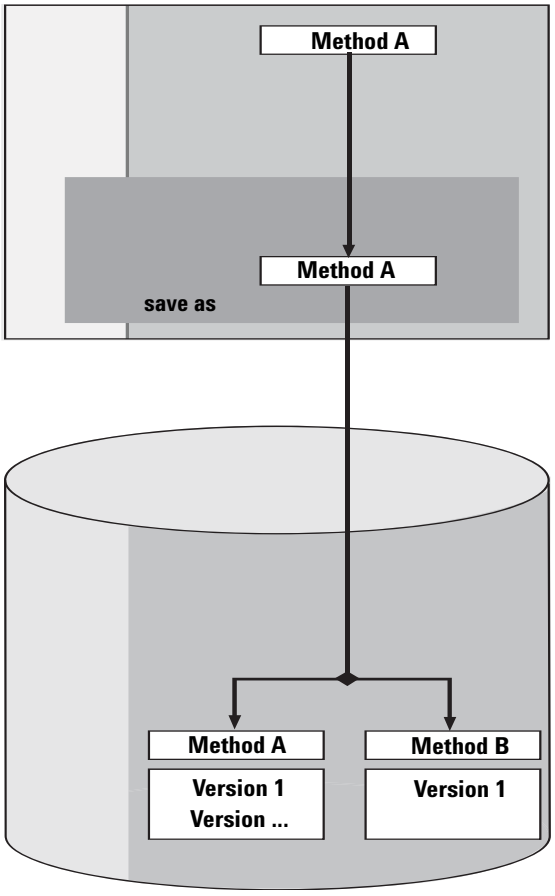

Figure 25 Method and Sequence Template related workflow: Save as - local items

Save as - Locally stored Method/Sequence Templates

The workflow 'Save as- local items',Figure 25 on page 56 illustrates how either locally stored methods or sequence templates (further documented as method/sequence templates) on your ChemStation PC are uploaded into ECM

1. Log In to ECM from the ChemStation
2. In the ChemStation, load the method/sequence template.
   (i.e File, Load method / File, Load Sequence menu)
3. In the ChemStation ECM Menu, select **Save Method As/Save Sequence As**. The ECM Save dialog box opens.
4. If necessary, navigate to the ECM data path of your choice to upload the method/sequence template. Note that a folder needs to be selected.
5. If necessary, save the item using a different name. By default the original name is used, but can be modified.
6. Click **Save** to leave the ECM Save dialog box.
7. When the **Add File** dialog box appears (see Figure 26 on page 57), enter a reason for the upload and click **OK** to proceed with the upload. The reason appears in the audit trail from ECM.

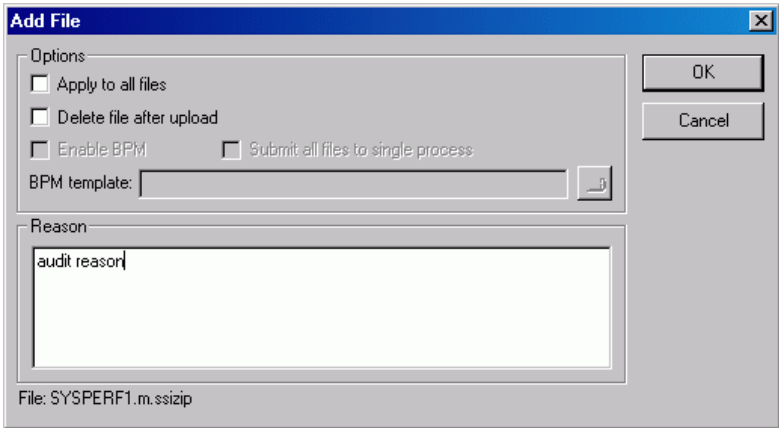

Figure 26 The Add File dialog box for methods

NOTE The option **Delete file after upload** in the Add File dialog box has no impact on ChemStation method/sequence files uploaded using the ChemStation ECM Integration. The original files remains on the local ChemStation file system.

8 The progress of the upload is displayed in a windows until the item is uploaded to ECM. Note that
   - methods are automatically packaged to *.m.ssizip files
   - sequence templates are automatically packaged to *.s.ssizip files

9 The newly uploaded method/sequence template are now present in the following locations:
   - ECM folder (as specified in the ECM Data Path) as <method filename> version 1 up to version x
     or <sequence template filename> version 1 up to version x
     ECM automatically tracks the versions of the methods/sequence templates and updates the version information if necessary.
   - ECM node (secure ChemStation area)
   - The original folder in the ChemStation
     Methods/sequence templates also remains on the local ChemStation file system.

ECM Method/Sequence Templates Workflows

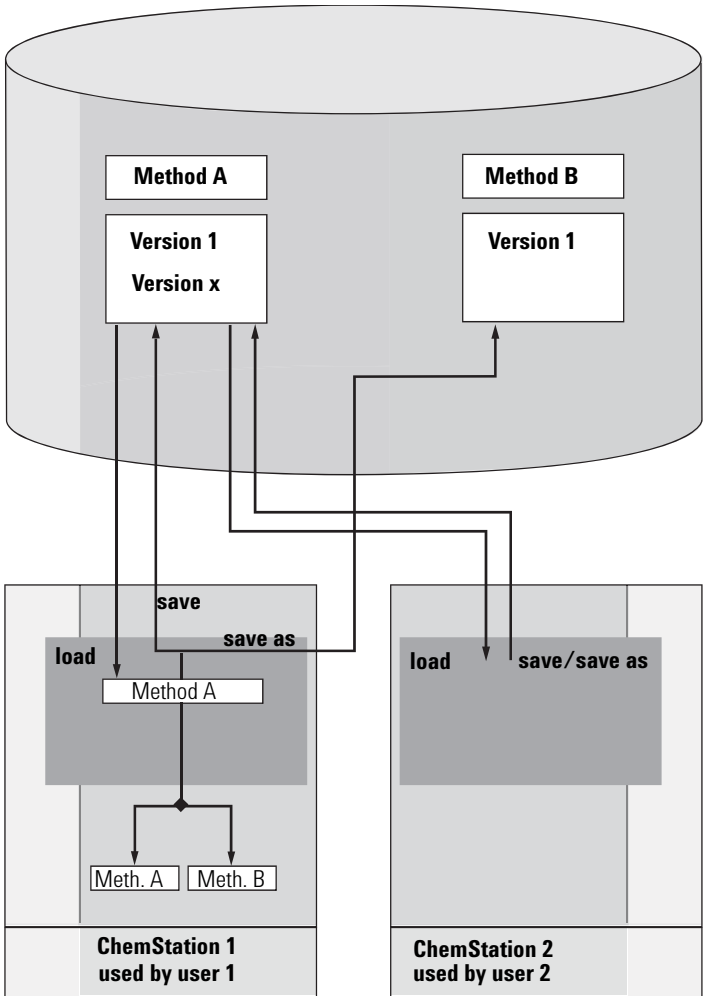

Figure 27 Method and Sequence Template related workflow: Load/Save/Save as - ECM Method/Sequence

Load - ECM Method/Sequence Templates

The workflow 'Load ECM Method/Sequences',Figure 27 on page 59 illustrates how methods/sequences that are stored in ECM can be loaded back into the ChemStation.

1 Log In to ECM from the ChemStation

2 In the ChemStation ECM Menu select **Load Method/Load Sequence**

3 The ECM Open dialog box opens. Navigate to the ECM folder to load the method/sequence template of your choice and select

- a method: *.m.ssizip file
- a sequence template: *.s.ssizip fils

In order to see more details regarding the available items, it is possible to use the details view using the details icon selection in the ECM Open dialog box, see Figure 28 on page 60, marker 1.

When the **Show Revisions** check box is enabled, it is possible to see all available versions of a method/sequence when opening the item, see Figure 28 on page 60, marker 2. By default, the last version is opened.

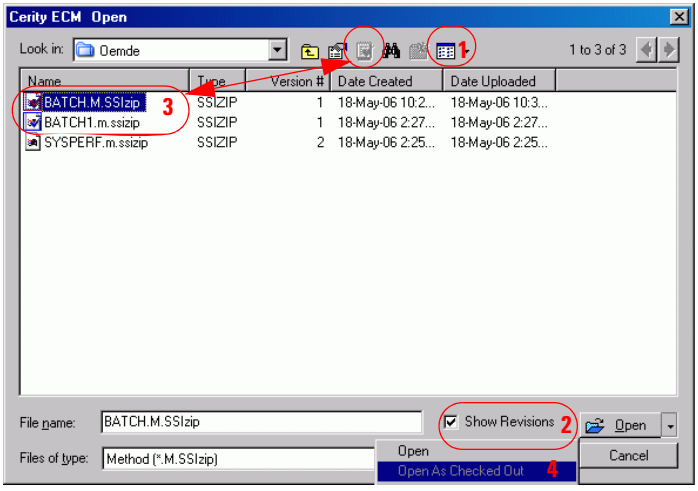

Figure 28 ECM Open dialog

4 If the item is checked out and used by the current user or another ECM user, the item is marked as 'checked out', see Figure 28 on page 60, marker 3:

- : (blue icon) the item has been checked out by you (current user)
- : (red icon) the item has been checked out by another ECM user

It is possible to load the checked out item, but it is not possible to save it back to ECM unless it has been checked in again by the user that checked the item out.

5 Select **Open** to load the item to the ChemStation. By default, the items are not checked out of ECM when it is loaded into the ECM node of the ChemStation. In order to prevent other users modifying the item in addition, it is possible to select the **Open as Checked Out** possibility to mark the item as checked out from ECM, see Figure 28 on page 60, marker 4.

NOTE By default, any item loaded from ECM into the ChemStation is not checked out from ECM and is still accessible by other ECM users. In order to prevent other users working on the same item, be sure to check out the item that you want to modify.

6 If the **Show Revisions** check box is selected, and multiple version of the item are available, you have the choice to select a specific version. Otherwise, the latest version is loaded. The progress of the loading is displayed in a window until the item is opened in the ChemStation.

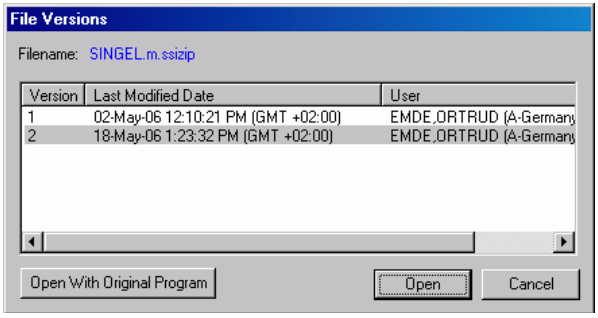

Figure 29 ECM File Version

7 The opened ECM method/sequence template is immediately loaded in the corresponding ChemStation view and marked as an ECM-related item.

Figure 30 ECM Method and Sequence in the ChemStation

8 The files are now present in the following location:

- ECM node (secure ChemStation area)
  Within the ChemStation Explorer, tooltips are available and give the information about the ECM storage location of the current loaded file and the checkout status, see Figure 31.

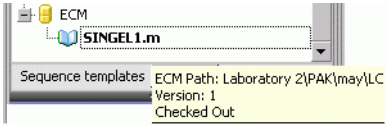

Figure 31 ECM Method and Sequence in the ChemStation

9 It is possible to use the Menu **Method > Save As / Sequence > Save as** to save the method /sequence template currently present in the ECM node to the local ChemStation file system.

Save - ECM Method/ECM Sequence Templates

The workflow 'Save -ECM Method/Sequence Template', see Figure 25 on page 56 requires that an ECM item (ECM method/ECM sequence template) is available in the ECM Integration in the ChemStation. The item is displayed in the ECM node of the ChemStation. In order to save it back to the ECM, ensure that the ECM method/ECM sequence template is loaded as method or sequence in the ChemStation and that you are logged into ECM.

1 In the ChemStation ECM Menu select **Save Method/ Save Sequence**.

Depending on the checkout status of the item, one of the following three scenarios can be expected:

a If you have checked out the item already during the load process from ECM to the ChemStation, it is possible to save the item directly back to ECM and automatically release the checkout.

b If you have not checked out the item during the load process from ECM to the ChemStation, the system gives you the possibility to check out the method/sequence prior to saving it back to ECM. Select **Yes** to save the item to ECM and continue with the next step.

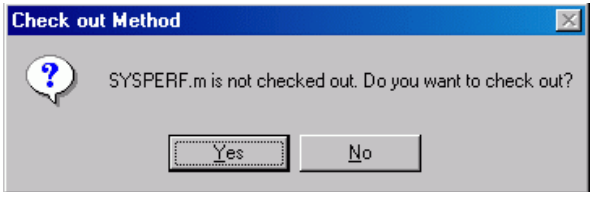

Figure 32 Check Out Method/Sequence

c If you have not checked out the item during the load process from ECM to the ChemStation and another ECM user has checked out the item in the meantime, you cannot proceed with the upload back to ECM. A warning message is displayed, see Figure 33 on page 64, and it is not possible to save the item back to ECM, until the other user has released the checked out item.

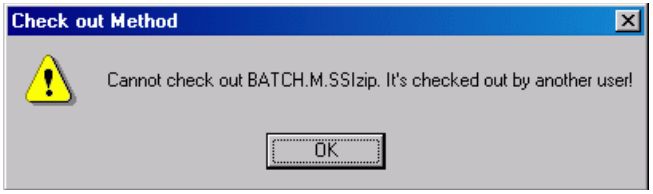

Figure 33 Check Out by other user

NOTE In order to modify items in the ChemStation, the item should be checked out from ECM. Otherwise, there is no guarantee that you are working on the latest version.

2 When the Add File dialog box appears (see Figure 26 on page 57), enter a reason for the upload and click **OK** to proceed with the upload. The reason appears in the audit trail from ECM

NOTE The option **Delete file after upload** in the **Add File** dialog box has no impact on ChemStation items uploaded using the ChemStation ECM integration.

3 The progress of the upload is displayed in a window until the upload to ECM has been completed.

4 The newly uploaded method/sequence template now present in the following locations:

- ECM folder (as specified in the ECM Data Path) as <method filename> or <sequence template filename> version x,
  where ECM automatically updates the version information.
- ECM node (secure ChemStation area)

Save as - ECM Method/ECM Sequence Template

The workflow '**Save as - ECM method/ECM sequence template**',Figure 25 on page 56requires, that an ECM item (ECM method/ECM sequence template) is available in the ECM Integration in the ChemStation. The item is displayed in the ECM node of the ChemStation. In order to save it back to the ECM, ensure that the ECM method/ECM sequence template is loaded in the ChemStation and that you are logged into ECM.

1 In the ChemStation ECM Menu select **Save Method As/ Save Sequence As**. The ECM Save dialog box opens.

2 If necessary, navigate to the ECM data path of your choice to save the ECM Method/ECM sequence template back to ECM. Note that a folder needs to be selected.
The option '**save as**' means in general, that you are saving the item using a new, unique name. In this respect, the current checkout status of the original item in ECM does not need to be taken into account. A new item, version 1, is created in ECM.

NOTE Be aware that when you use the 'save as' option for checked out data to the ChemStation ECM Integration, the item is *not* automatically released by saving the item back to ECM using a new name. The original item remains checked out.

3 When the **Add File** dialog box appears (see Figure 26 on page 57), enter a reason for the upload and click **OK** to proceed with the upload. The reason appears in the audit trail from ECM.

NOTE The option **Delete file after upload** in the Add File dialog box has no impact on the upload of ChemStation items.

4 The progress of the upload is displayed in a window until the data is saved back to ECM.

5 The newly saved ECM method/ECM sequence template are now present in the following locations:

- ECM folder (as specified in the ECM Data Path) as <method filename> or <sequence template filename> version 1,
  where as ECM automatically updates the version information.
- ECM node (secure ChemStation area)

5 Attribute Extraction Services for ChemStation Data

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ChemStation XML Attribute Extraction Service (ChemStation A.10.02 and later) 71
ChemStation XML Attribute Extraction Service (ChemStation B.02.01 SR1 and later) 71
ChemStation Filter 72

This chapter provides an overview of the available ECM Attribute Extraction Services (AES) for ChemStation data. The AES extract metadata information from the ChemStation data files. These metadata make the ChemStation data searchable. For detailed information, refer to the ECM documentation.

Attribute Extraction Services for ChemStation Data

ECM Attribute Extraction Services (AES) provides the following AES for the extraction of metadata from ChemStation data files:

- The **ChemStation XML** filter extracts peak, compound and result data from the result.xml file generated by the XML export routine in ChemStation revision A.10.02 and later.
- The extended **ChemStation XML** filter extracts in addition metadata at data container level. These metadata are delivered by the *.acaml file generated by the ECM export routine in ChemStation revision B.02.01 SR1 and later.
- The **ChemStation** filter extracts basic sample and run data from the header of the channel files (*.ch), *.uv and *.txt files generated by all ChemStation revisions.

AES need to be installed by an ECM Administrator on the ECM Server; in addition, the filters need to be enabled for the system. The keys of an AES that are to be applied to a ChemStation file need to be selected for the respective LCDF structure. These are ECM Administration tasks, and are described in the Enterprise Content Manager Administrator´s Guide and/or the ECM online help.

The metadata can be queried using various search types in ECM. The ECM Search functionality is also available within the ChemStation. When opening a file from ECM, the **ECM Open** dialog box allows you to search for files of interest using the 'lookup glass' icon, see figure Figure 34.

Using the Quick Search, you can search through various alphanumeric fields by entering a search key, such as an operator name. On the upcoming search page, you select the **Advanced** button where, depending on the enabled filter packages, various keys are enabled, see Figure 35 on page 70.

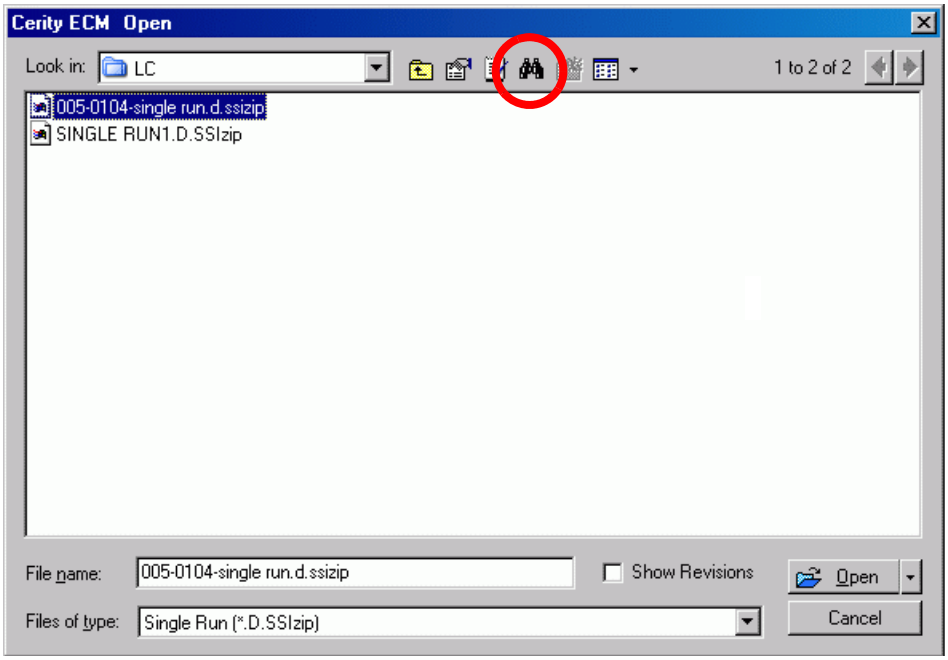

Figure 34 Search option

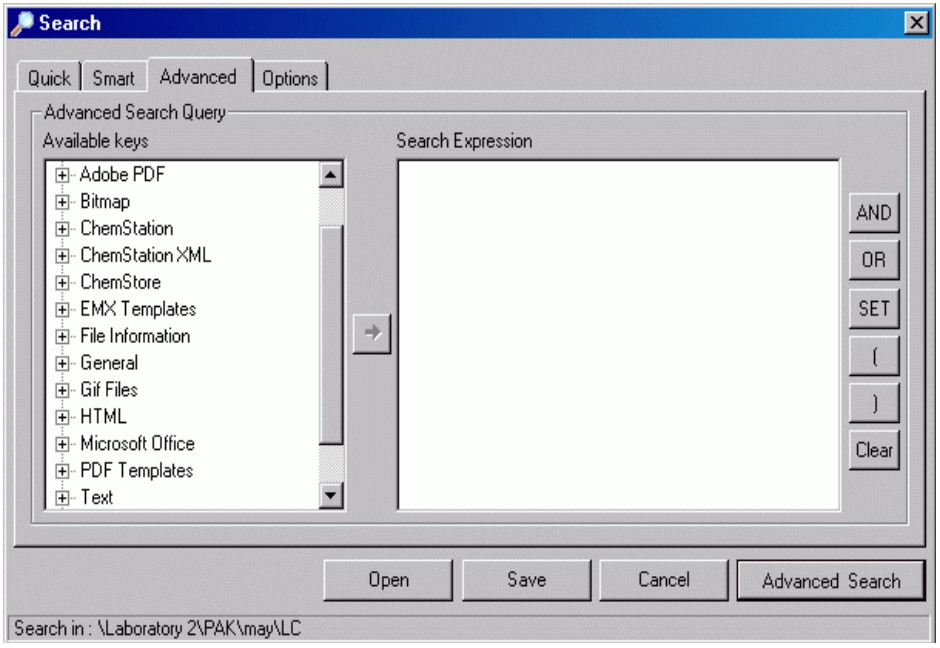

Figure 35 Filters available as search option

In the **Search** dialog box, you can specify the available keys, and it is possible to define a search expression by combining two or more of the available keys using Boolean operators. For detailed information regarding the use of the various search algorithms, refer to the online help of your ECM system or the Enterprise Content Manager Administrator's Guide, as well as the AES-related manuals.

ChemStation XML Attribute Extraction Service (ChemStation A.10.02 and later)

The AES for ChemStation XML extracts key information from the following categories of the result.xml generated by the ChemStation Rev. A (revision A.10.02 and later) and the ChemStation Rev. B (revision B.01.01.and later) per data file. Note that the ChemStation must be configured to generate the result.xml file if necessary, see the ChemStation XML Connectivity Guide.

- Acquisition (for example, instrument name, method information)
- Chromatogram (for example, derivative order, detector name)
- Custom
- Module
- Peaks (for example, peak name, amount, retention time, compound name)
- Sample (for example, calibration method, LIMS ID)
- Signal/Noise

ChemStation XML Attribute Extraction Service (ChemStation B.02.01 SR1 and later)

The extended ChemStation XML AES extracts not only key information from the result.xml per data file as described above, but also enables metadata at data container level to be extracted. These metadata are delivered by *.acaml files generated by ChemStation revision B.02.01 SR1 and later.

- single run data - sample.acaml
- sequence data - sequence.acaml

An ECM Scheduler Add-In for Agilent ChemStation enables the ECM Scheduler to upload data *.acaml automatically to ECM. The following metadata are delivered at data container level:

- Acquisition (for example, instrument name, injection date)
- Chromatogram (for example, amounts, detector name)
- Module
- Peaks (for example, peak name, amount, retention time)
- Sample (for example, sample name, LIMS ID)

If you want to use the AES at the datafile level, you need to enable the XML export routine in addition.

ChemStation Filter

The AES for ChemStation extracts attributes from *.ch, *.uv, and *.txt files created by the 16-Bit ChemStation (Rev A.x.x) or 32-Bit ChemStation (Rev B.x.x). It extracts key information from the header of ChemStation *.ch and *.uv data files (for example, sample name, method file, instrument model). From the report.txt file, it extracts key information (for example, sample name, acquisition method, analysis method). In addition, the service extracts information on support files from the category Content.

An ECM Scheduler Add-in for Agilent ChemStation enables the ECM Scheduler to upload data generated by the ChemStation to ECM automatically.

6
Using Print Services in the ChemStation

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Installing the CyberPrinter XP 75
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Configuring the ECM Print Service / CyberPrinter XP Type - Adobe Distiller 78
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This chapter gives a brief overview of how to install and configure the Print Services, which enable you to automatically upload ChemStation reports in a PDF format to ECM.

ECM Print Services / CyberPrinter XP

ECM Print Services / CyberPrinter XP are print management systems that transfers human readable electronic documents to ECM. Both can be used to print ChemStation reports in a PDF format to ECM.

When you add and configure a print service, it appears as an available printer on your computer. When you select to print using ECM Print Services / CyberPrinter XP, a PDF file is created and automatically uploaded to the ECM system. In addition, you can also set up the system to print additional hardcopies to a conventional printer.

Depending on the ECM Server Revision is use, the user can install either

- Cyber Printer XP for ECM Server revision 3.2.0
- ECM Print Services for ECM Server revision 3.3.1

The **ECM Print Service** / **CyberPrinter XP** consists of two components for both tools:

The **ECM Print Service / CyberPrinter XP Print Manager,** where you add and manage CyberPrinters.

The **ECM Print Service** / **CyberPrinter XP Service**, which monitors a folder on your local disk drive. When a print service receives a print job, the print driver prints to a file in the monitor folder. Then the ECM Print Service / CyberPrinter XP service intercepts the file and uploads it to ECM. In order for a file to be uploaded to the ECM program, it must have the file extension *.pdf.

Setting Up the ECM Print Service/CyberPrinter XP

Installing the ECM Print Service

The installation and setup of the ECM Print Service requires following steps. The installation details are given in the ECM Print Service documentation.

1. Connect to the ECM server revision 3.3.1 and select the Administration Tab.
2. In the Download section of the Administration Tab, select the **ECM Print Services** for ECM and run the installation. Follow the instructions given by the installation wizard.
3. After the installation, the ECM Print Service icon is available in the task bar and the Amyuni PDF Convert is available as printer (see Start> Settings> Printers and Faxed> Amyuni PDF Converter).
4. Double-click the ECM Print Service icon and the ECM login dialog is displayed.
5. Log in to the CyberPrinter XP and click **Login** to proceed for configuration.

Installing the CyberPrinter XP

The installation and setup of the CyberPrinter XP requires following steps. The installation details are given in the ECM Print Service documentation.

1. Connect to the ECM server revision 3.2.x and select the Administration Tab.
2. In the Download section of the Administration Tab, select the **CyberPrinter XP** and run the installation. Follow the instructions given by the installation wizard.
3. After the installation, the CyberPrinter XP icon is available in the task bar.
4. Double-click the CyberPrinter XP icon and the ECM login dialog is displayed.
5. Log in to the CyberPrinter XP and click **Login** to proceed for configuration.

Configuring the ECM Print Service for use with Amyuni PDF Converter

1 Create a monitor folder on your ChemStation ECM Client system. The folder should not be placed in the Chem32 directory.

2 Right-click on the ECM Print Services icon in the task bar and select **Configure Printers**.

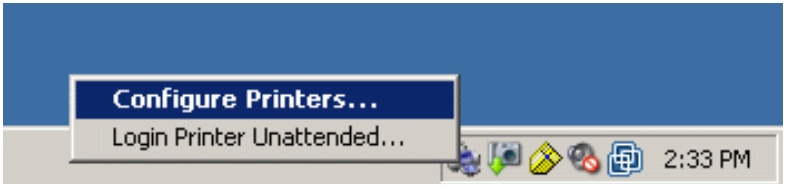

Figure 36 ECM Print Service Icon

3 Log on to the **ECM Print Services**.

4 Select the **Add Printer** icon to add a printer with the following details:

- Type: PDF Converter
- Name: Specify a unique name, e.g. Chem1 Print
- Define the printer security options in accordance with your organization´s security policies.

5 Click **Add** to continue. Depending on your PC configuration, an message is coming up for the “Browse for Folder”. Leave that message with **OK**.

6 In the upcoming “Browse for Folder” dialog, select the monitor folder for the ECM print service.

7 The printer has now been created successfully and is available in the **ECM Service** dialog.

8 Right-click on the ECM Print Services icon in the task bar and select **Configure Printers,** see figure Figure 36 on page 76.

9 Open the printer configuration by marking your specific printer and select the configuration tab. For details, refer to the ECM Print Services online help.

- ECM: you need to specify the ECM (LCDF) data path where the uploaded files will be stored after transfer.
- Settings: Transfer specific settings.
- Hardcopy Printers: It is also possible to get a hardcopy printout.
- Email: It is possible to enable email notification.

10 Click **Apply** to apply the configuration to the ECM Print Service and leave the dialog box with **OK**.

11 Leave all printer-related dialog boxes with **OK**.

12 In the ChemStation, it is now possible to specify the newly configured printer in the 'File' pull-down menu under 'Printer set up'. It is possible to select the ECM Print Service / CyberPrinter XP as specific printer; if the printer has been marked as default printer in the Windows Settings, it will be already defined as default printer in the ChemStation.

Typically, when you print to a ECM Print Service / CyberPrinter XP, a dialog box asks you to confirm the upload location in ECM as well as some other settings for each report. If you are planning to print a whole sequence of reports, you can confirm these settings once for the series and than run the printer in unattended mode for a specified time. The duration of the unattended mode is set in the Configuration of the CyberPrinter during setup, but can be modified at any time. To set the printer to 'unattended mode', do the following:

1 Right-click on the toolbar icon CyberPrinter XP and select **Login Printer Unattended**.

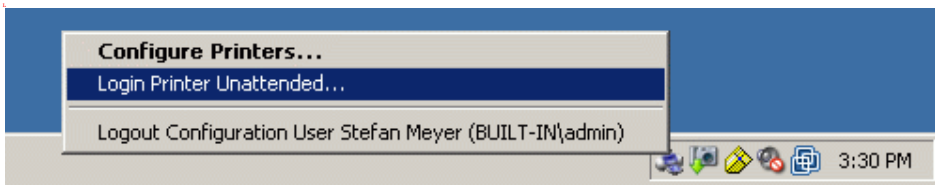

Figure 37 Define Logon for Print Services

2 Select the printer that you want to operate in unattended mode.

3 Confirm the job settings once and click **OK**.

Configuring the ECM Print Service / CyberPrinter XP Type - Adobe Distiller

1. Create a monitor folder on your ChemStation ECM Client system. The folder should not be placed in the Chem32 directory.
2. Select the Add Printer icon to add a printer with the details:
   - Type: Adobe Distiller
   - Name: Specify a unique name, e.g. Chem1 Print
   - Define the printer security options in accordance with your organization's security policies.
   - In the upcoming Add Port dialog box, choose **Add Port** and select the specified monitor folder on the ChemStation ECM client.
3. Click Add to continue and browse for the monitor folder for the ECM print service.
4. Open the printer configuration by marking your specific printer and select the configuration tab.
   - ECM: you need to specify the ECM data path where the uploaded files will be stored after transfer.
   - Settings: Transfer specific settings.
   - Hardcopy Printers: It is also possible to get a hardcopy printout.
   - Email: It is possible to enable email notification.

   For details, refer to the CyberLabXP online help
5. Click **Apply** to apply the configuration to the Print Service and leave the dialog box with **OK**.
6. Depending on the Acrobat Distiller version in use, additional configuration settings are necessary. A message informs you to perform certain tasks.
   Example for Adobe Distiller Rev. 6.00:
   In Start, Settings, Printers open the properties of the newly added printer.
   Select the **Print Preferences** and
   - in the Adobe PDF Conversion Settings, deselect "**View Adobe PDF results**"
   - in the Adobe PDF Output Format, select the monitored path of the ChemStation ECM Client

- select **Edit** for the default settings and on the upcoming Adobe PDF Settings dialog box, deselect **optimize for fast Web View** and save the settings.

7 Leave all printer-related dialog boxes with **OK**.

8 In the ChemStation, it is now possible to specify the newly configured printer in the 'File' pull-down menu under 'Printer set up'. It is possible to select the ECM Print Service / CyberPrinter XP as specific printer; if the printer has been marked as default printer in the Windows Settings, it will be already defined as default printer in the ChemStation.

Typically, when you print to a Print Service, a dialog box asks you to confirm the upload location in ECM as well as some other settings for each report. If you are planning to print a whole sequence of reports, you can confirm these settings once for the series and than run the printer in unattended mode for a specified time. The duration of the unattended mode is set in the Configuration of the ECM Print Service / CyberPrinter during setup, but can be modified at any time. To set the printer to 'unattended mode', do the following:

1 Right-click on the toolbar icon ECM Print Service / CyberPrinter XP and select **Login Printer Unattended**, see Figure 37 on page 77.

2 Select the printer that you want to operate in unattended mode.

3 Confirm the job settings once and click **OK**.

Working with the Print Services in the ChemStation

When the Print Services are used as printers in the ChemStation, any report printed using the Print Service is converted to a *.pdf file and placed in the monitored folder and transferred by the print service to the specified location in ECM. During conversion to PDF, the name supplied by the system is fixed, and defined as

- single runs: datafile name.pdf
- sequence runs: sequence name_ datafile name.pdf
- sequence summary reports: SSR_sequencename.pdf

The maximum file length for this automatically generated report naming is 30 characters; longer files names are truncated. If, due to the truncation, filenames are the same, the existing file is overwritten.

NOTE When you are using the ChemStation ECM Client, be aware that when you specify the sequence pattern and datafile name in the sequence setup, the complete *.pdf file name cannot exceed 30 characters.

7 Troubleshooting

ECM Server is not available 82
ECM Server is not available before/during Login 82
ECM Server is not available after Login 82

The chapter gives some elementary troubleshooting hints.

ECM Server is not available

If the ECM server is not available while working with the ChemStation, there are two possible scenarios.

ECM Server is not available before/during Login

If the ECM server is not available while logging in to ECM from the ChemStation, the user cannot be authenticated by the ECM system. The Login is aborted and there will be no access to the whole ECM functionality in the ChemStation; all menu items will be grayed out.

For further troubleshooting, please contact your ECM administrator.

ECM Server is not available after Login

If the ECM Server connection is interrupted after login to ECM from the ChemStation, the user has been authenticated by the ECM system. In this case, the ChemStation knows the current logged-in user.

When the ECM server becomes unavailable, the ChemStation tries to reestablish the user login automatically.

The ECM Open, Save, Save As functions are accessible, but an alert informs the user about the interrupted connection to the ECM.

While acquiring data, the automatic transfer of data to ECM cannot be completed. The user is notified by an error message and must manually upload the data later as soon as the connection is reestablished.

As soon as the ECM server is available again, all ECM tasks are available without restarting the application. A new login is not required.

For further troubleshooting, please contact your ECM administrator.

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In This Book

This Guide describes the implementation of the ECM Interface between the Agilent ChemStation and an ECM client/server environment. It contains the product installation, configuration, as well as workflow descriptions.

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